



INNOVATIVE TECHNOMICS PVT. LTD.

ISO 9001:2015



FCMA SOFT STARTER

Harmonic Free Motor Starting Solutions

COMPANY PROFILE

Innovative Technomics Pvt Ltd is a pioneer of harmonic free FCMA (Flux Compensator Magnetic Amplifier) Electrical soft starter and a market leader since 1986. Using inhouse break-through innovation the company provided smooth starting solutions. Innovative Technomics intends to use this innovation to achieve a substantial global presence.

ITPL products are widely used across a diverse set of industries which include water supply, steel power, cement, textile, biotech and mining. Its customers include some leading names from the above core industries, both in India and abroad. The company is known for the following innovative products.

AWARDS AND ACHIEVEMENTS:

- Best & Most innovative Products (FCMA) Soft Starter ELECRAMA
- More than 10000 HT Soft starters supplied and successfully installed
- More than 10000 LT Soft starters supplied and successfully installed
- Supply and commissioning of FCMA's abroad in 18 countries including France, Philippines, Dubai, Sudan, Jamaica, Uganda, Senegal, Indonesia, Lebanon, Zambia, Tanzania, Nepal, Bangladesh, Saudi Arabia, Ghana, Vietnam, Algeria and Kenya

TEST CERTIFICATIONS:

- FCMA soft Starters commissioned for 22 kV systems
- Impulse test for 75 kVp & One minute power frequency withstand for 28 KV Carried out at ERDA & CPRI
- Harmonic Free testing by NPC
- Seismic Testing

APPLICABLE STANDARDS:

FCMA soft starters are designed and manufactured, tested in line with relevant clauses of IEC/IS Standards. The general standards applicable are IEC 60071-2, IEC 60060-1, IEC 627271-1, IS 7816:1975, IS 12661(Part 1):1988, IEC 60529. The FCMA soft starters are tested at the central power research institute (CPRI) Bengaluru, Karnataka, India as per the above standards.

FCMA SOFT STARTERS:

- High voltage Soft starters upto 11kV/22kV (100KW-12.5 MW)
- Medium voltage soft starters 6.6 kV (200 KW-4300 kW)
- Low voltage Soft starters upto 690 V(15KW-1300KW)

ER Models:

Represents Models with Energy Recovery facility for HT Motors starting on adequate power source

ER-MC Models:

Represents Models with Energy Recovery facility and magnetic compensation for HT Motors starting on adequate power source

DC Models:

Represents Models with Dynamic Compensators for LT & HT Motors with limited power source

ROTOR CONTROLLERS:

- Resistive type FCMA technology provides slip department automatic resistance variation
- Provides constant current & constant torque & acceleration
- The starting current is adjustable from 100% to 250% depending upon torque requirement
- Rotor controllers (15KW to 3000 KW) Load Balancer
- Automatic Slip Regulator (50KW to 4 MW)

ROTOR CONTROLLERS:

- Tailor made Systems
- Load banks
- Excitation Panels
- Control Automation Panels

TECHNOLOGY

- Easy to install and operate
- No electronic components hence highly reliable in harsh electrical supply conditions like low voltages of frequencies.
- No Electronic Components hence- no environmental restrictions. Can work in dusty humid and hot environments without air conditioning
- Fail safe
- Neutral side Connection (HV motors) makes installation simple and retrofitting very easy
Generator size can be optimized thus technology pays for itself during capital expenditure. Optimized power mover saves fuel continuously when operated at high load factors

OPERATING PRINCIPLE

FCMA soft starters are also step less reduced Voltage starters which ensures a constant starting current with incremental voltage and torque to the motor to achieve smooth acceleration of the drive

As the motor speed increases the FCMA impedance decreases due to counter EMF(Electromotive Force) feedback to achieve incremental voltage and torque for the motor while keeping current constant.

The Voltage across the motor increases smoothly from starting value (about 50% to 60%) to run value (about 94% to 98%) with motor speed.

A built in bypass device closes to ensure full voltage running of the motor

By pass contactor operation can be time, current or speedbased.

BENEFITS:

- Reduced starting current limits voltage drop to acceptable limits
- Harmonic free starting eliminates electrical supply disturbances
- Transformer size can be optimised
- Fault level reduction, Reduction in economical switch and cable with detailed engineering
- Optimization of start/stop cycle in pumps for energy conservation
- Suitable in extreme weather conditions
- Easy to install & Operate

ELITE CLIENT LIST

- Air liquid Engineering India Ltd
- Bangalore water supply and sewage board
- Bhilai steel plant
- Dubai Airport Free zone area (DAFZA)
- Hyderabad Metropolitan Water supply and sewage Board
- India Glycols Limited
- Indian Oil corporation Ltd
- Jindal Iron & steel Company Ltd
- Kirloskar Brothers Limited
- Larsen and Toubro Limited
- Noryhern Coalfields Ltd
- Tata Steel Ltd
- Atlas Copco (India) Ltd
- Birla Tyres
- York air Conditioning & refridgeration
- Apollo Tyres
- Hero Moto Corp Ltd
- Hyundai motors Ltd
- Volkswagon
- Maruti Udyog LIMITED
- Wanakbori Thermal Power
- Shree Renuka sugars
- Bharat Petroleum Corporation Ltd
- Vizag Steel Plant
- Ingersoll Rand
- HPCL
- SPML Infra Ltd
- IVRCL Infrastructures & Projects Ltd.
- Unipro Techno Infrastructure Pvt. Ltd.
- Megha Engineering & Infrastructures Ltd
- Fortune Engineering & Energy Services
- Andhra Sugars Ltd
- Essar communications
- Essar Steel
- Gujrat State Electricity Corporation Ltd
- INOX Air Products Ltd
- Karnataka Power Corporation Ltd
- Tata Motors
- JP Mukherji & Associates Pvt Ltd
- Toyota
- Asea Brown bovari Ltd
- Bharat cookin Coal Ltd
- Ahmedabad Urban development authority
- Andhra Pradesh SIDC
- Bombay Oxygen Corporation
- Fiat India Automobiles Pvt Ltd
- Delhi Jal Board
- Maharashtra Krishna Valley
- Development Corporation

SALIENT FEATURES:

- Complete motor starting engineering solution as part of pre sales service to customer
- Innovative Flux compensation Technology for incremental motor voltage & torque at constant starting current
- Low starting Current
- Fully Sinusoidal current & voltage waveform without harmonics & distortion
- Starting currents adjustable form 1.5 to 3.5 times full load current depending upon load and motor characteristics
- Built in RUN mode bypass
- Virtually no maintenance
- No forced cooling required
- Unique neutral side connection limits fault rating of soft starter & is highly economical
- Extremely simple construction
- Easy to Install & Operate
- Suitable in extreme weather conditions
- Customized in or for design to suit end application and operating parameters
- Soft starter will be provided with HMI +PLC



INNOVATIVE TECHNOMICS PVT. LTD.



Factory: Plot No 1A/9, Sector 10, PCNTDA, Near Vishweshwar Chowk, M.I.D.C. Bhosari, Pune-411026.



marketing@itechnomics.com



www.innovativetechnomics.com



+91 20 27120019, +91 9423578196

Harmonic Free Motor Starting Solutions with FCMA Technology

Zero harmonics (Eliminates mechanical jerks/electrical stresses)

Low starting current 1.5 times (Reduces grid load at starting of drive)

Long life of motor / driven equipment

Very safe in operation

Extremely Reliable

Six number of starts/hr and immediate hot start possible

Immediately suppresses even external oscillations and voltage surges (Protects Equipments)

Negligible Maintenance

